

THE DØ COLLABORATION

R. Piegai, A. Salles
Universidad de Buenos Aires, Buenos Aires, Argentina

G.A. Alves, J. Barreto, H. da Motta, M.-E. Pol, M. Souza, M. Vaz
LAFEX, Centro Brasileiro de Pesquisas Físicas, Rio de Janeiro, Brazil

A.C.S. Assis Jesus, M. Begalli, W. Carvalho, C. De Oliveira Martins, H.B. Malbouisson, J. Molina,
L. Mundim, V. Oguri, N. Oliveira, W.L. Prado da Silva, R.F. Rodrigues, A. Santoro, A. Sznajder
Universidade do Estado do Rio de Janeiro, Rio de Janeiro, Brazil

E.M. Gregores, S.M. Lietti, P.G. Mercadante, S.F. Novaes
Instituto de Física Teórica, Universidade Estadual Paulista, São Paulo, Brazil

S. Beale, C. Belanger-Champagne, Y. Coadou, D. Gillberg, Z. Liu, R.W. Moore, D.C. O'Neil, W. Taylor,
B. Vachon, M.C. Vetterli
**University of Alberta, McGill University, Simon Fraser University and York University,
Canada**

H.S. Mao
Institute of High Energy Physics, Beijing, People's Republic of China

C. Avila, B. Gómez, D. Mendoza, J.P. Negret, R. Ramirez, J.M.R. Roldan
Universidad de los Andes, Bogotá, Colombia

P. Krivkova, R. Leitner, K. Soustruznik
Charles University, Center for Particle Physics, Prague, Czech Republic

P. Homola, Z. Hubacek, V. Hynek, R. Otec, V. Simak, K. Smolek
Czech Technical University, Prague, Czech Republic

A. Kupco, M. Lokajicek, P. Sicho, L. Tomasek, V. Vrba
**Institute of Physics, Academy of Sciences, Center for Particle Physics, Prague, Czech
Republic**

B. Hoeneisen
Universidad San Francisco de Quito, Quito, Ecuador

F. Badaud, P. Gay, Ph. Gris, V. Lesne, F. Tissandier
**Laboratoire de Physique Corpusculaire, IN2P3-CNRS, Université Blaise Pascal,
Clermont-Ferrand, France**

Y. Arnoud, F. Chevallier, S. Crépé-Renaudin, A.-M. Magnan, G. Sajot, J. Stark, C. Yu
**Laboratoire de Physique Subatomique et de Cosmologie, IN2P3-CNRS, Université de
Grenoble, Grenoble, France**

S. Calvet, M.-C. Cousinou, A. Duperrin, E. Kajfasz, S. Kermiche, A. Mendes, E. Nagy, M. Talby
CPPM, IN2P3-CNRS, Université de la Méditerranée, Marseille, France

L. Duflot, J.-F. Grivaz, M. Jaffré, N. Makovec, P. Pétronoff, P. Verdier
Laboratoire de l'Accélérateur Linéaire, IN2P3-CNRS, Orsay, France

B. Andrieu, U. Bassler, S. Beauceron, G. Bernardi, E. Busato, S. Trincaz-Duvold, J.-R. Vlimant
LPNHE, Universités Paris VI and VII, IN2P3-CNRS, Paris, France

M. Agelou, M. Besançon, F. Déliot, P. Demine, P. Lutz, M. Michaut, E. Perez, C. Royon, V. Shary,
B. Tuchming, D. Vilanova
DAPNIA/Service de Physique des Particules, CEA, Saclay, France

J.-L. Agram, D. Bloch, F. Charles, B. Clément, A. Gay, W. Geist, D. Gelé, S. Greder, A.-C. Le Bihan,
A. Lounis, I. Ripp-Baudot, V. Siccardi
**IReS, IN2P3-CNRS, Université Louis Pasteur Strasbourg, and Université de Haute Alsace,
France**

N. Estre, G. Grenier, T. Kurča, P. Lebrun, J.P. Martin, T. Millet, G.S. Muanza
**Institut de Physique Nucléaire de Lyon, IN2P3-CNRS, Université Claude Bernard,
Villeurbanne, France**

C. Autermann, T. Hebbeker, D. Käfer, C. Magass, A. Meyer
RWTH Aachen, III. Physikalisches Institut A, Aachen, Germany

T. Golling, J. Meyer, A. Quadt, C. Schwanenberger, N. Wermes
Universität Bonn, Physikalisches Institut, Bonn, Germany

U. Blumenschein, V. Buescher, I. Fleck, H. Fox, G. Herten, K. Jakobs, J.-P. Konrath, C. Noeding,
M. Titov, I. Torchiani
Universität Freiburg, Physikalisches Institut, Freiburg, Germany

C. Ay, M. Hohlfeld, D. Meder, S. Tapprogge, T. Trefzger, C. Zeitnitz
Universität Mainz, Institut für Physik, Mainz, Germany

O. Biebel, M. Binder, T. Christiansen, J. Elmsheuser, F. Fiedler, P. Haefner, B. Leonhardt,
T. Nunnemann, D. Schaile, P. Schieferdecker, R. Ströhmer
Ludwig-Maximilians-Universität München, München, Germany

J. Boehme, K. Hamacher, A. Harel, H. Hoeth, S. Kersten, P. Mättig, C. Schmitt, M. Vaupel, Y. Yen
Fachbereich Physik, University of Wuppertal, Wuppertal, Germany

S.B. Beri, V. Bhatnagar, R. Kaur, J.M. Kohli
Panjab University, Chandigarh, India

B. Choudhary, A. Kumar, M. Naimuddin, K. Ranjan, R.K. Shivpuri
Delhi University, Delhi, India

B.S. Acharya, P. Banerjee, S. Banerjee, S. Chakrabarti, A. Chandra, S.R. Dugad, P.K. Mal, N.K. Mondal,
K.J. Rani
Tata Institute of Fundamental Research, Mumbai, India

M.W. Grünewald
University College Dublin, Dublin, Ireland

S.H. Ahn, S.J. Hong, T.J. Kim, K.S. Lee, S.K. Park
Korea Detector Laboratory, Korea University, Seoul, Korea

H. Castilla-Valdez, E. De La Cruz-Burelo, P.L.M. Podesta-Lerma, A. Sánchez-Hernández
CINVESTAV, Mexico City, Mexico

P.W. Balm, F. Blekman, K. Bos, S. Caron, P. de Jong, J.G. Hegeman, P. Houben, G.G.G. Massaro,
P.J. van den Berg, W.M. van Leeuwen, M. Vreeswijk
FOM-Institute NIKHEF and University of Amsterdam/NIKHEF, Amsterdam, The Netherlands

M. Anastasoiae, S.J. de Jong, F. Filthaut, C.F. Galea, N.A. Naumann, D.A. Wijngaarden
University of Nijmegen/NIKHEF, Nijmegen, The Netherlands

V.M. Abazov, G.D. Alexeev, D.V. Bandurin, G. Erusalimtsev, G. Golovanov, A.M. Kalinin,
Y.M. Kharzeev, E.V. Komissarov, V.L. Malyshev, Y.P. Merekov, S.Y. Porokhovoi, N.A. Russakovich,
A.A. Shishkin, N.B. Skachkov, V.V. Tokmenin, L.S. Vertogradov, Y.A. Yatsunenko
Joint Institute for Nuclear Research, Dubna, Russia

A. Evdokimov, V. Gavrilov, P. Polozov, V. Stolin, V.I. Turtikov
Institute for Theoretical and Experimental Physics, Moscow, Russia

E.E. Boos, S. Bunichev, L.V. Dudko, P. Ermolov, D. Karmanov, A. Koubarovsky, A. Leflat, M. Merkin,
V.I. Rud, S. Sherstnev, E.G. Zverev
Moscow State University, Moscow, Russia

V.A. Bezzubov, S.P. Denisov, S.A. Efremov, V.N. Evdokimov, A.V. Ferapontov, A.K. Klimenko,
V.M. Korablyov, V.I. Koreshev, A.V. Kozelov, E.A. Kozlovsky, V.V. Lipaev, A.V. Popov, A.A. Schukin,
Y.V. Sinkin, D.A. Stoyanova, I.A. Vasilyev, S.A. Zvyagintsev
Institute for High Energy Physics, Protvino, Russia

G. Alkhazov, S. Anufriev, V. Kim, A. Lobodenko, P. Neustroev, G. Obrant, Y. Scheglov, L. Uvarov,
S. Uvarov
Petersburg Nuclear Physics Institute, St. Petersburg, Russia

B. Åsman, L. Berntzon, C. Clément, P. Eerola, T. Ekelöf, N. Gollub, P. Hansson, S. Lager,
B. Lund-Jensen, T. Moa, J. Strandberg

**Lund University, Royal Institute of Technology, Stockholm University, and Uppsala
University, Sweden**

M. Audsley Hammond, I. Bertram, C. Biscarat, G. Borissov, B. Davies, M. Doidge, A.J. Finch, M. Lewin,
P. Love, P.N. Ratoff, A. Sopczak

Lancaster University, Lancaster, United Kingdom

C. Barnes, R. Beuselinck, I. Blackler, C.P. Buszello, G. Davies, J.F. Hassard, A. Jenkins, R. Jesik,
P. Jonsson, P. Lewis, L. Lobo, M. Petteni, S. Robinson, T. Scanlon, F. Villeneuve-Seguier

Imperial College, London, United Kingdom

B. Cox, T. Edwards, M. Ford, L. Han, J. Monk, E. Nurse, M.P. Sanders, S. Söldner-Rembold, P. Telford,
T.R. Wyatt

University of Manchester, Manchester, United Kingdom

N.M. Giao, D. Han, T.M. Ngoc, H.T.K. Trang, T.D. Tu

Hochiminh City Institute of Physics, Hochiminh City, Vietnam

S. Anderson, S. Burke, E. Cheu, B. Gmyrek, K. Johns, J. Leveque, R. McCroskey, M. Shupe,
P. Tamburello, J. Temple, E.W. Varnes

University of Arizona, Tucson, Arizona 85721, USA

R.J. Madaras, M. Strovink

**Lawrence Berkeley National Laboratory and University of California, Berkeley, California
94720, USA**

R.E. Hall

California State University, Fresno, California 93740, USA

S. Choi, R. Clare, J. Ellison, R. Gelhaus, A.P. Heinson, I. Iashvili, P.M. Perea, S.J. Wimpenny
University of California, Riverside, California 92521, USA

T. Adams, S. Blessing, N.J. Buchanan, S. Hagopian, V. Hagopian, D. Kau, J. Lazoflores, W.M. Lee,
S.L. Linn, J. Miao, S. Nelson, H.B. Prosper, S. Sengupta, S. Sumowidagdo, S. Tentindo-Repond, H.D. Wahl
Florida State University, Tallahassee, Florida 32306, USA

B. Baldin, J.F. Bartlett, R. Bernhard, P.C. Bhat, A. Boehnlein, F. Borcherding, A. Bross, S. Burdin,
W.E. Cooper, M. Demarteau, D. Denisov, H.T. Diehl, M. Diesburg, V.D. Elvira, J. Estrada, J. Fast,
H.E. Fisk, S. Fu, S. Fuess, E. Gallas, K. Gounder, H. Greenlee, S. Grünendahl, G. Gutierrez, K. Hanagaki,
R. Illingworth, A.S. Ito, M. Johnson, A. Jonckheere, A. Juste, B. Klima, S. Krzywdzinski, F. Lehner,
Q.Z. Li, D. Lincoln, R. Lipton, L. Lueking, A.L. Lyon, Y. Maravin, M. Martens, K.W. Merritt,
M. Mulders, A. Nomerotski, V. O'Dell, N. Oshima, V.M. Podstavkov, P.A. Rapidis, P. Rubinov, G. Savage,
V. Sirotenko, R.P. Smith, L. Stutte, I. Terekhov, M. Tomoto, M. Weber, V. White, D. Wicke, M. Wobisch,
J. Womersley, R. Yamada, T. Yasuda, M. Zanabria, D. Zhang

Fermi National Accelerator Laboratory, Batavia, Illinois 60510, USA

M. Adams, M. Buehler, M. Camuyrano, C.E. Gerber, J.M. Heinmiller, G.J. Otero y Garzón, E. Shabalina,
A. Stone, T. Ten, N. Varelas
University of Illinois at Chicago, Chicago, Illinois 60607, USA

L. Bagby, G. Blazey, D. Chakraborty, A. Dyshkant, M. Eads, M. Fortner, D. Hedin, J.G.R. Lima,
A.K.A. Maciel, X. Song, N.M. Tran, S. Uzunyan, A. Zatserklyaniy, V. Zutshi
Northern Illinois University, DeKalb, Illinois 60115, USA

T. Andeen, D. Buchholz, G.A. Davis, M. Gagliardi, J. Hays, H. Schellman, D. Strom, S. Yacoob, S.W. Youn
Northwestern University, Evanston, Illinois 60208, USA

D. Bauer, A. Kryemadhi, J. Rieger, K. Stevenson, R. Van Kooten, L. Welty, D. Zieminska, A. Zieminski
Indiana University, Bloomington, Indiana 47405, USA

O. Boeriu, N.M. Cason, E. Galyaev, A. Goussiou, M.D. Hildreth, D. Karmgard, A. Kharchilava, H. Luo,
M. Lynker, Y. Pogorelov, R. Ruchti, W.D. Shephard, J. Torborg, J. Warchol, M. Wayne, N. Xuan
University of Notre Dame, Notre Dame, Indiana 46556, USA

O. Atramentov, J.M. Hauptman
Iowa State University, Ames, Iowa 50011, USA

P. Baringer, A. Bean, L. Christofek, D. Coppage, J. Gardner, C. Hensel, S. Jabeen, T. Moulik,
G.W. Wilson
University of Kansas, Lawrence, Kansas 66045, USA

M. Ahsan, T.A. Bolton, K. Harder, D. Onoprienko, F. Rizatdinova, M. Shamim, R.A. Sidwell, M. Smith,
E. Von Toerne
Kansas State University, Manhattan, Kansas 66506, USA

M. Das, Z.D. Greenwood, S. Malik, N. Parashar, L. Sawyer, J. Steele
Louisiana Tech University, Ruston, Louisiana 71272, USA

A. Baden, S. Eno, N.J. Hadley, C. Jarvis, S. Kunori, T. Toole, M. Verzocchi, L. Wang, M. Wetstein,
M. Yan, J. Zhu
University of Maryland, College Park, Maryland 20742, USA

K.M. Black, J.M. Butler, A. Das, S.N. Fatakia, L. Feligioni, U. Heintz, J. Kasper, M. Narain,
L. Sonnenschein
Boston University, Boston, Massachusetts 02215, USA

G. Alverson, E. Barberis, S. Doulas, R. Harrington, G. Hesketh, S. Reucroft, D. Shpakov, D.R. Wood
Northeastern University, Boston, Massachusetts 02115, USA

A. Alton, J.D. Degenhardt, C. Han, A. Magerkurth, H.A. Neal, J. Qian, Q. Xu, Z. Zhao, B. Zhou
University of Michigan, Ann Arbor, Michigan 48109, USA

M. Abolins, J. Benitez, R. Brock, J. Dyer, D. Edmunds, R. Hauser, J. Kalk, J. Kozminski, J. Linnemann,
B.G. Pope, R. Schwienhorst, R. Unalan, H. Weerts
Michigan State University, East Lansing, Michigan 48824, USA

A. Melnitchouk, B. Quinn
University of Mississippi, University, Mississippi 38677, USA

A. Bellavance, D. Claes, C. Lundstedt, G.R. Snow, M. Voutilaine
University of Nebraska, Lincoln, Nebraska 68588, USA

W. Fisher, J. Haley, A. Schwartzman, C. Tully
Princeton University, Princeton, New Jersey 08544, USA

T. Bose, G. Brooijmans, H. Evans, A. Haas, C. Johnson, I. Katsanos, D. Khatidze, B. Kothari,
S. Lammers, C. Leonidopoulos, J. Mitrevski, J. Parsons, P.M. Tuts
Columbia University, New York, New York 10027, USA

M. Begel, J. Cammin, K.M. Chan, D.K. Cho, R. Demina, T. Ferbel, C. Garcia, G. Ginther, A. Khanov,
T. Negrini, S.-J. Park, M.-A. Pleier, P. Slattery, M. Zielinski
University of Rochester, Rochester, New York 14627, USA

S. Desai, H. Dong, P.D. Grannis, J. Guo, J.D. Hobbs, Y. Hu, R. McCarthy, Y.D. Mutaf, N. Parua,
M. Rijssenbeek, R.D. Schamberger, S. Towers, D. Tsybychev, A. Yurkewicz
State University of New York, Stony Brook, New York 11794, USA

V. Jain, S. Kahn, J. Kotcher, A. Patwa, S. Protopopescu, S. Snyder, A.S. Turcot, K. Yip
Brookhaven National Laboratory, Upton, New York 11973, USA

J. Snow
Langston University, Langston, Oklahoma 73050, USA

B. Abbott, P. Gutierrez, I. Hall, S. Jain, M. Kopal, A. Pompoš, H. Severini, P. Skubic, M. Strauss
University of Oklahoma, Norman, Oklahoma 73019, USA

B.C.K. Casey, D. Chapin, D. Cutts, Y. Gershtein, R. Hooper, S. Kesisoglou, G. Landsberg,
S.E.K. Mattingly, R. Partridge, Y. Xie, H.D. Yoo
Brown University, Providence, Rhode Island 02912, USA

A. Brandt, K. De, F. Jaafari, H. Kim, J. Li, M. Sosebee, B. Spurlock, M.A. Strang, A. Vartapetian,
A. White, J. Yu
University of Texas, Arlington, Texas 76019, USA

R. Kehoe
Southern Methodist University, Dallas, Texas 75275, USA

A. Askew, P. Bargassa, M. Cooke, M. Corcoran, S.J. Lee, D. Mackin, H. Miettinen, P. Padley, G. Pawloski
Rice University, Houston, Texas 77005, USA

R. Hirosky, K. Nelson
University of Virginia, Charlottesville, Virginia 22901, USA

T.H. Burnett, T. Gadfort, A. Garcia-Bellido, G. Gaudio, H.J. Lubatti, G. Watts, T. Zhao
University of Washington, Seattle, Washington 98195, USA